

hin's *R. montanus gramineofolio*. *R. parnassifolius* was Tournefort's *R. montanus graminis parnassifolio*. *R. bullatus* is Bauhin's *R. latifolius bullatus*. Unfortunately for Dr. L.'s illustration he never established a *R. palustris*. There was, to be sure, Bauhin's "*R. palustris apiifolio lævis*," but for once he ignored both the swamp and the smooth parsley leaf, and dubbed it *R. Sceleratus*. Thus we might go through the whole list of the Linnæan ranunculuses. *Ophioglossoides* is from Villars, *Ficaria* from Haller, *Thora* from Crantz, *Creticus* from Bauhin, *cassubicus* from Breyne, *aconitifolius* from Bauhin, *rutæfolius* from Bauhin, and so on of many others, a large number being Bauhin's names.

In the reorganization of systematic botany, Linnæus was a collator and condenser, rather than a creator, and the fact that, as far as possible, he preserved the work of his predecessors, and did all honor to their labors, justifies the high estimation of his personal character so generally entertained.—THOMAS MEEHAN, *Germantown, Philadelphia*.

A day-blooming *Cereus grandiflorus*.—Our *Cereus grandiflorus* has, on three occasions and with five different blossoms, made a fatal and in no instance entirely successful effort to expand during the day. In each case the abortive attempt was caused by a sudden marked lowering of temperature *when the bud was almost ready to open*, thus retarding the growth.

In the first instance, a year ago, the flower partly opened about 8:00 A. M. on the second day after it had to all appearances planned to expand had external conditions proved favorable. It soon drooped, however, as the sun's rays fell upon it.

This year the cold wave early in July, with mercury at 44° at 7 A. M., and but little higher at mid-day, caught two fine buds in a similar manner. Again expansion was retarded at least one, and, I am inclined to think, two days and several odd hours. They opened sufficiently to show the interior at 10:00 A. M. and 11:00 A. M. respectively, and like their abnormal predecessor soon drooped in the sunshine (the plant stands on a south porch), and did not revive with the approach of twilight as a friend fondly hoped.

Again, Aug. 1st, two other buds similarly retarded behaved in the same way. The day was cool and cloudy. At 9:00 A. M. the sepals of one had loosened at the tip. From 9:30 to nearly 10:00 o'clock the phenomena that attend the normal opening of this beautiful flower were present. At 10:00 A. M. the maximum was seemingly reached. The petals were then open nearly as wide as is their custom, the outer sepals, instead of bending back almost to the tube, opened at nearly a right angle with it; the stigma, as in all previous abortive ef-

forts, only partly opened. On the whole, the flower was a very creditable specimen, and the novelty of seeing so fine a one in broad daylight was duly appreciated. In half an hour more the sun, which shone dimly at times, was beginning to tell upon it. I cut it off, placed it in water in a dark room, where it remained with little change until 1:30 P. M., when it rapidly withered. Its companion was a little less ambitious in every respect, and was in its prime at 11:30 A. M., but being allowed to remain on the plant, proved more transient.

Other buds which reached maturity when the weather was warm opened in the usual manner.—BESSIE L. PUTNAM, *Harmonsburg, Penn.*

*Ustilago Reiliana* on corn.—*Ustilago Reiliana* Kühn was discovered several years ago at this place on sorghum and was first reported from here for America. Since then it has occurred in abundance in sorghum fields in other parts of the United States. Last year and this year it has been common in the experimental sorghum fields of this college; but up to this time has not been reported, to my knowledge, on *Zea Mays* from this continent, though found on that plant in Europe. The first stalk of corn affected by this smut was found in July of this year, and since then I have seen it quite frequent in fields about Manhattan. The smut usually appears first in the male inflorescence of the host plant, sometimes converting the whole upper part of the plant into a mass of smut, sometimes smutting only some of the flowers which are usually in this case enlarged and deformed. The whole plant is much dwarfed by the parasite, scarcely attaining more than half the normal size. The ears are small, and when not filled with the smut they are deformed, often very curiously, and scarcely ever develop any perfect grains. The rudimentary ears at each node from the base of the plant upward are nearly always affected. *Ustilago Reiliana* might be mistaken by the ordinary observer for *U. maydis*, the usual corn smut, and is perhaps more common than generally supposed; but they are easily distinguished when seen together. *U. Reiliana* has a more granular appearance, as if mixed with meal, due to the large colorless cells which accompany the spores. The fibers which remain in the smut mass are much larger than in *U. maydis*. The microscopic characters will of course distinguish the two species. A difference of greater economic importance lies in the fact that *U. Reiliana* attacks the whole plant, almost destroying it, while *U. maydis* is more local, and plants affected with it usually appear uninjured except at the point attacked by the parasite.—J. B. S. NORTON, *Kansas State Agricultural College, Manhattan.*